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## RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/850,982B

DATE: 04/24/2002

TIME: 14:10:26

Input Set : A:\88265-4025.txt

Output Set: N:\CRF3\04242002\I850982B.raw

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3 <110> APPLICANT: Nestec S.A.  
 5 <120> TITLE OF INVENTION: COFFEE MANNANASE  
 7 <130> FILE REFERENCE: 88265-4025  
 9 <140> CURRENT APPLICATION NUMBER: 09/850,982B  
 10 <141> CURRENT FILING DATE: 2001-05-08  
 12 <160> NUMBER OF SEQ ID NOS: 12  
 14 <170> SOFTWARE: PatentIn version 3.1  
 16 <210> SEQ ID NO: 1  
 17 <211> LENGTH: 1613  
 18 <212> TYPE: DNA  
 19 <213> ORGANISM: Coffea arabica  
 21 <400> SEQUENCE: 1

22	ttcattaaaa	atggccttct	ccaggagaag	caatatcagc	aacttctctt	gctgcttcoct	60
24	tgtgatcatc	gtcttatccc	tgcattgcga	aaatcatata	gtttcttctt	ctgcttcgcg	120
26	ctttattcaa	acaagaggaa	cccgattcgt	gttaggtggc	taccattttt	ttttcaatgg	180
28	gttcaactcc	tactggatga	tgcattgtgc	agctgagcca	agtgaaggcc	ataaaatttc	240
30	caatgtatth	cgcgaggctg	ctgctacagg	gcttactgtt	tgccggacat	gggcattcag	300
32	cgatgggtgg	gatcgagctc	ttcaaattgc	ccccggagtc	tatgatgaac	gtgtctttca	360
34	ggcccttgat	tttgtggtat	cggaagcaag	gaagtatgga	gttcacttaa	tcctgagtct	420
36	gaccaacaac	tacaaggact	ttggaggaag	gacgcaatac	gtgacgtggg	ctaaaaatgc	480
38	cggagtacaa	gtgaatagcg	atgatgattt	ttacaccaag	aatgctgtca	agggatatta	540
40	caagaatcac	attaagaaaag	tgttgactag	gatcaacaca	atcagtagag	ttgcatataa	600
42	agatgatcca	acagtcattg	catgggagct	aataaatgaa	cctcgttgcc	aggtcgactt	660
44	ctccggaaaa	accttaaatg	cttgggttca	agaaatggca	acttacgtca	aatcactcga	720
46	taacaaacac	cttctagaaa	taggcattgga	gggattctac	ggagattcaa	tgccaggcaa	780
48	aaagcagtag	aatcctggat	accaagtggg	cacagatttt	atcaccaata	atcttatcaa	840
50	agagatagat	tttgcaacca	ttcatgcata	tcccgatatt	tggctgtctg	gacagagcga	900
52	cgggtgcacag	atgatgttca	tgagaagggtg	gatgaccagt	cactccacag	actctaagac	960
54	catacttaaa	aaaccattgg	ttctcgctga	atttgggaaa	tcaagtaaag	atccaggata	1020
56	cagttttatat	gccaggaggat	cattcatggc	cgcaattttac	ggtgatattct	acaggtttgc	1080
58	tagaagagga	ggcattgcag	gtggattggg	ttggcaaato	ctggccgagg	gaatgcaacc	1140
60	gtacgcagat	gggtatgaaa	ttgtcttgtc	tcagaaccca	tcaaccggac	gaatcataag	1200
62	ccaacagtct	cgacaaatga	cttcaactcga	ccatatgagc	agtaatagaa	ccaatttcta	1260
64	aagcaacaaa	ctgcgcgaatt	caaaggagca	gtgatcagtc	ttccagaaaag	tctacttgag	1320
66	tttgttcgta	tgtcaaaatc	aagtatcaac	catagaaatt	tccattatat	tcggagtgtt	1380
68	ttagtcaagt	tctagtaata	ccgctggagt	catgatagtt	atgacagtaa	taccgctgga	1440
70	gtcaagttct	agtaataccg	ttggagtcga	gttatgatag	ttatttaaaa	attagttatt	1500
72	tattacaaat	ttgtttattgt	gtgagacttg	tttattaagt	aaatggaaaa	gtcttatcat	1560
74	tattatcatt	tgagaaaaaa	aaaaaaaaaa	aaaaaaaaaa	aaaaaaaaaa	aaa	1613
77	<210>	SEQ ID NO: 2					
78	<211>	LENGTH: 427					
79	<212>	TYPE: PRT					
80	<213>	ORGANISM: Coffea arabica					

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82 <400> SEQUENCE: 2
84 Met Ala Phe Ser Arg Arg Ser Asn Ile Ser Asn Phe Ser Cys Cys Phe
85 1 5 10 15
88 Leu Val Ile Ile Val Leu Ser Leu His Cys Glu Asn His Ile Val Ser
89 20 25 30
92 Ser Ser Ala Ser Arg Phe Ile Gln Thr Arg Gly Thr Arg Phe Val Leu
93 35 40 45
96 Gly Gly Tyr Pro Phe Phe Phe Asn Gly Phe Asn Ser Tyr Trp Met Met
97 50 55 60
100 His Val Ala Ala Glu Pro Ser Glu Arg His Lys Ile Ser Asn Val Phe
101 65 70 75 80
104 Arg Glu Ala Ala Ala Thr Gly Leu Thr Val Cys Arg Thr Trp Ala Phe
105 85 90 95
108 Ser Asp Gly Gly Asp Arg Ala Leu Gln Met Ser Pro Gly Val Tyr Asp
109 100 105 110
112 Glu Arg Val Phe Gln Ala Leu Asp Phe Val Val Ser Glu Ala Arg Lys
113 115 120 125
116 Tyr Gly Val His Leu Ile Leu Ser Leu Thr Asn Asn Tyr Lys Asp Phe
117 130 135 140
120 Gly Gly Arg Thr Gln Tyr Val Thr Trp Ala Lys Asn Ala Gly Val Gln
121 145 150 155 160
124 Val Asn Ser Asp Asp Asp Phe Tyr Thr Lys Asn Ala Val Lys Gly Tyr
125 165 170 175
128 Tyr Lys Asn His Ile Lys Lys Val Leu Thr Arg Ile Asn Thr Ile Ser
129 180 185 190
132 Arg Val Ala Tyr Lys Asp Asp Pro Thr Val Met Ala Trp Glu Leu Ile
133 195 200 205
136 Asn Glu Pro Arg Cys Gln Val Asp Phe Ser Gly Lys Thr Leu Asn Ala
137 210 215 220
140 Trp Val Gln Glu Met Ala Thr Tyr Val Lys Ser Leu Asp Asn Lys His
141 225 230 235 240
144 Leu Leu Glu Ile Gly Met Glu Gly Phe Tyr Gly Asp Ser Met Pro Gly
145 245 250 255
148 Lys Lys Gln Tyr Asn Pro Gly Tyr Gln Val Gly Thr Asp Phe Ile Thr
149 260 265 270
152 Asn Asn Leu Ile Lys Glu Ile Asp Phe Ala Thr Ile His Ala Tyr Pro
153 275 280 285
156 Asp Ile Trp Leu Ser Gly Gln Ser Asp Gly Ala Gln Met Met Phe Met
157 290 295 300
160 Arg Arg Trp Met Thr Ser His Ser Thr Asp Ser Lys Thr Ile Leu Lys
161 305 310 315 320
164 Lys Pro Leu Val Leu Ala Glu Phe Gly Lys Ser Ser Lys Asp Pro Gly
165 325 330 335
168 Tyr Ser Leu Tyr Ala Arg Glu Ser Phe Met Ala Ala Ile Tyr Gly Asp
169 340 345 350
172 Ile Tyr Arg Phe Ala Arg Arg Gly Gly Ile Ala Gly Gly Leu Val Trp
173 355 360 365
176 Gln Ile Leu Ala Glu Gly Met Gln Pro Tyr Ala Asp Gly Tyr Glu Ile
177 370 375 380

```

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```

180 Val Leu Ser Gln Asn Pro Ser Thr Gly Arg Ile Ile Ser Gln Gln Ser
181 385                               390                               395                               400
184 Arg Gln Met Thr Ser Leu Asp His Met Ser Ser Asn Arg Thr Asn Ser
185                               405                               410                               415
188 Gln Ser Asn Lys Leu Arg Asn Ser Lys Glu Gln
189                               420                               425

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192 <210> SEQ ID NO: 3  
193 <211> LENGTH: 20  
194 <212> TYPE: DNA  
195 <213> ORGANISM: Artificial Sequence  
197 <220> FEATURE:  
198 <223> OTHER INFORMATION: Synthetic oligonucleotides provided by Eurogentec (Parc

Scientifi que due Sart Tilman [Sart Tilman Scientific Park]-4102 Seraing-Be

```

199 lguim).
200
202 <220> FEATURE:
203 <221> NAME/KEY: misc_feature
204 <222> LOCATION: (3)..(3)
205 <223> OTHER INFORMATION: a or c or g or t/u
208 <220> FEATURE:
209 <221> NAME/KEY: misc_feature
210 <222> LOCATION: (12)..(12)
211 <223> OTHER INFORMATION: a or c or g or t/u
214 <400> SEQUENCE: 3

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20

W--> 215 ggnatggarg gnttytaygg

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218 <210> SEQ ID NO: 4
219 <211> LENGTH: 15
220 <212> TYPE: DNA
221 <213> ORGANISM: Artificial Sequence
223 <220> FEATURE:
224 <223> OTHER INFORMATION: Synthetic oligonucleotides provided by Eurogentec (Parc

```

Scientifi

```

225 que due Sart Tilman [Sart Tilman Scientific Park]-4102 Seraing-Be
226 lguim).
228 <400> SEQUENCE: 4
229 tttttttttt ttttt

```

15

```

232 <210> SEQ ID NO: 5
233 <211> LENGTH: 17
234 <212> TYPE: DNA
235 <213> ORGANISM: Artificial Sequence
237 <220> FEATURE:
238 <223> OTHER INFORMATION: Synthetic oligonucleotides provided by Eurogentec (Parc

```

Scientifi

```

239 que due Sart Tilman [Sart Tilman Scientific Park]-4102 Seraing-Be
240 lguim).
242 <400> SEQUENCE: 5
243 aaatctgtgc ccacttg
246 <210> SEQ ID NO: 6
247 <211> LENGTH: 17
248 <212> TYPE: DNA
249 <213> ORGANISM: Artificial Sequence
251 <220> FEATURE:

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17

RAW SEQUENCE LISTING  
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Input Set : A:\88265-4025.txt  
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252 <223> OTHER INFORMATION: Synthetic oligonucleotides provided by Eurogentec (Parc Scientifi

253 que due Sart Tilman [Sart Tilman Scientific Park]-4102 Seraing-Be

254 lguim).

256 <400> SEQUENCE: 6 17

257 gtaaaacgac ggccagt

260 <210> SEQ ID NO: 7

261 <211> LENGTH: 17

262 <212> TYPE: DNA

263 <213> ORGANISM: Artificial Sequence

265 <220> FEATURE:

266 <223> OTHER INFORMATION: Synthetic oligonucleotides provided by Eurogentec (Parc

Scientifi

267 que due Sart Tilman [Sart Tilman Scientific Park]-4102 Seraing-Be

268 lguim).

270 <400> SEQUENCE: 7 17

271 caggaaacag ctatgac

274 <210> SEQ ID NO: 8

275 <211> LENGTH: 21

276 <212> TYPE: PRT

277 <213> ORGANISM: Coffea arabica

279 <220> FEATURE:

280 <221> NAME/KEY: MISC\_FEATURE

281 <222> LOCATION: (16)..(16)

282 <223> OTHER INFORMATION: variable

285 <400> SEQUENCE: 8

W--> 287 Ser Phe Asn Phe Val Lys Thr Arg Gly Thr Glu Phe Val Met Asp Xaa

288 1 5 10 15

291 Arg Phe Leu Tyr Leu

292 20

295 <210> SEQ ID NO: 9

296 <211> LENGTH: 10

297 <212> TYPE: PRT

298 <213> ORGANISM: Coffea arabica

300 <400> SEQUENCE: 9

302 Thr Trp Ala Phe Ser Asp Gly Gly Tyr Arg

303 1 5 10

306 <210> SEQ ID NO: 10

307 <211> LENGTH: 17

308 <212> TYPE: PRT

309 <213> ORGANISM: Coffea arabica

311 <400> SEQUENCE: 10

313 Glu Tyr Asn Pro Gly Tyr Gln Val Gly Thr Asp Phe Ile Ser Asn Asn

314 1 5 10 15

317 Arg

321 <210> SEQ ID NO: 11

322 <211> LENGTH: 36

323 <212> TYPE: DNA

324 <213> ORGANISM: Artificial Sequence

326 <220> FEATURE:

327 <223> OTHER INFORMATION: Synthetic oligonucleotides provided by Eurogentec (Parc

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```
328      que due Sart Tilman [Sart Tilman Scientific Park]-4102 Seraing-Be
329      lguim).
331 <400> SEQUENCE: 11
332 gtcttatccc tggatcccga aaatcatata gtttct
335 <210> SEQ ID NO: 12
336 <211> LENGTH: 40
337 <212> TYPE: DNA
338 <213> ORGANISM: Artificial Sequence
340 <220> FEATURE:
341 <223> OTHER INFORMATION: Synthetic oligonucleotides provided by Eurogentec (Parc
Scientifi
342      que due Sart Tilman [Sart Tilman Scientific Park]-4102 Seraing-Be
343      lguim).
345 <400> SEQUENCE: 12
346 gtactctgca gactttctgg aagactgata actgctcctt
```

36

40

RAW SEQUENCE LISTING ERROR SUMMARY  
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Input Set : A:\88265-4025.txt  
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Please Note:

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:3; N Pos. 3,12  
Seq#:8; Xaa Pos. 16

## VERIFICATION SUMMARY

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Input Set : A:\88265-4025.txt

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L:215 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:3 after pos.:0  
L:287 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:8 after pos.:0